

TECH NOTE

ISO 9001:2008
ISO 14001

HOW CAN I QUALIFY IF A COMPRESSION PACKING MEETS LOW VOC EMISSIONS STANDARDS?

Statistics quantify that over 60% of VOC (volatile organic compound) emissions from refineries are caused by valve leakage. The American Petroleum Institute developed a fugitive emissions test known as API 622 (rev II) to replicate a year of operation of a 4" Class-300 valve sealing methane gas:

1. Valve is heated to 500°F and pressurized to 600 psi
2. Valve is actuated 300 cycles daily for 5 days: 150 cycles at 500°F, then 150 cycles at ambient temperature. Leakage is measured every 50 cycles
3. Final 10 cycle leakage measure to end the test
4. No packing adjustment is permitted during the test
5. Maximum allowable leakage is 100 ppm

The test also includes:

- A weight loss test at elevated temperature to measure excessive oxidation detrimental to proper sealing
- A PTFE content test to measure for excessive use of PTFE which provides improved sealability but low resistance to proper sealing at higher temperatures and potential pitting or even a fire
- A corrosion test at both ambient and elevated temperatures

API 622 is not certification; it is a compliance test to confirm if a given compression packing meets API established performance criteria for low emissions.

Contact Robco for additional technical information at info@robco.com Thank you !

Your Robco Technical Team

